

**BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Application of Southern California Edison Company (U338E) for Approval of Contracts Resulting From Its 2014 Energy Storage Request for Offers (ES RFO).

Application 15-12-003
(Filed December 1, 2015)

Application of Pacific Gas and Electric Company for Approval of Agreements Resulting From Its 2014-2015 Energy Storage Solicitation and Related Cost Recovery.

Application 15-12-004
(Filed December 1, 2015)

(U 39 E)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
COMMENTS ON THE PROPOSED DECISION**

CHARLES R. MIDDLEKAUFF
MARK R. HUFFMAN

Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-3842
Facsimile: (415) 973-5520
E-mail: MRH2@pge.com

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

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Pursuant to the Rule 14.3 of the California Public Utilities Commission’s (Commission) Rules of Practice and Procedure, Pacific Gas and Electric Company (PG&E) provides its comments on the July 20, 2016 Proposed Decision of ALJ Cooke (PD) in this proceeding.

Generally speaking, PG&E supports the PD. However, PG&E requests several specific changes to the PD, as well as a reconsideration of the PD’s rejection of PG&E’s purchase and sale agreements (PSAs).

Summarizing PG&E’s comments:

- PG&E supports the PD’s approval of PG&E’s four energy storage agreements (ESAs) serving a generation/market participation function;
- PG&E requests that the PD be modified to remove the conclusion that PG&E’s proposed PSA projects, each of which is intended to serve a distribution capacity/distribution deferral function, fail to guarantee necessary capacity to allow for distribution investment deferral based on their online dates;
- PG&E requests that the PD’s disapproval of PG&E’s two PSAs be reconsidered, and that they be approved;
- PG&E supports the PD’s determination not to incorporate a “storage adder” into the power charge indifference adjustment (PCIA) calculation at this time;

- PG&E requests that the PD be modified with respect to energy storage agreements where the utility is responsible for the cost of charging, to state that the PD is clarifying, rather than modifying, the investor-owned utilities' (IOUs) PCIA proposal;
- Responding to the PD's admonishment regarding PG&E's "CPUC approval" contract clause, PG&E proposes to use the non-modifiable clause in the renewable portfolio standard (RPS) power purchase agreement (PPA); and
- PG&E requests that the PD be modified to indicate that if PG&E has not yet met its 2014 storage target after Application (A.) 16-04-024 is decided, then any shortfall will be added to the amount that PG&E is to seek in its 2016 energy storage request for offer (ES RFO).

Appendix A contains PG&E's proposed modifications to the findings of fact, conclusions of law, and ordering paragraphs.

I. STORAGE AGREEMENTS

In its application, PG&E originally requested approval of five ESAs totaling 73 megawatts (MW) of storage capacity and serving a generation/market participation function. PG&E also requested approval of two PSAs totaling two MW of storage capacity and each serving a distribution deferral function.¹ In its opening brief PG&E stated that one of the ESAs, three MW in size, had been terminated.²

Thus, in this application PG&E is now seeking approval of four ESAs totaling 70 MW and each serving a generation/market participation function, and seeking approval of two PSAs totaling two MW and each serving a distribution deferral function.

The PD approves PG&E's four ESAs,³ and disapproves PG&E's two PSAs.⁴ PG&E supports the approval of its proposed ESAs, and respectfully requests that the PD's rejection of PG&E's two PSAs be reconsidered.

¹ PG&E Opening Brief, pp. 1-2.

² PG&E Opening Brief, p. 3.

³ PD, p. 11.

⁴ PD, p. 13.

A. PG&E Supports The PD’s Approval Of PG&E’s Four Energy Storage Agreements Serving A Generation/Market Participation Function

As the PD notes, no party takes issue with PG&E’s proposed ESAs.⁵ PG&E supports the PD’s approval⁶ of these storage agreements.

B. PG&E Requests Reconsideration Of The PD’s Rejection Of PG&E’s Two Purchase And Sale Agreements Serving A Distribution Capacity/Distribution Deferral Function

The Office of Ratepayer Advocates (ORA) objects to PG&E’s two proposed distribution deferral projects⁷ and the PD rejects them, based in part on finding that they may not serve their identified distribution deferral function.⁸ PG&E requests that the PD be modified to remove this finding, and requests that PG&E’s two distribution deferral projects be approved.

1. The PD Should Be Modified To Remove The Conclusion That PG&E’s Proposed Distribution Deferral Projects Would Not Provide The Necessary Capacity To Allow For Distribution Investment Deferral

The PD determines that the PG&E’s proposed distribution deferral projects “fail to guarantee necessary transformer capacity to allow for distribution investment deferral based on their online dates. . . .”⁹ This conclusion is incorrect. Each PSA is expected to provide the necessary capacity to allow for distribution investment deferral.

The PD states that “the transformers at [the two PSA] locations will become overloaded prior to the commercial operation date of the purchase and sale agreements.”¹⁰ The PD refers to Exhibit ORA-2C to support this statement.¹¹ However, that exhibit does not address loading of transformers at the Mendocino and Old Kearney substations. It discusses PG&E’s “portfolio

⁵ PD, p. 11.

⁶ PD, p. 11.

⁷ PD, p. 12.

⁸ PD, p. 13.

⁹ PD, p. 13.

¹⁰ PD, pp. 12-13.

¹¹ PD, p. 12.

adjusted value” (PAV) analysis of the proposed PSA projects, but does not contain any information regarding the loading at the two substations.

As discussed below, other material cited by ORA in its reply brief does address transformer loading at the Mendocino and Old Kearney substations. However, the PD’s conclusion that, “the PSAs fail to allow for distribution deferral based on their online dates,” does not follow from the statement that “the transformer banks at the two locations will become overloaded prior to the commercial operation date of the PSAs.”

With respect to the Mendocino substation, in its reply brief ORA states that PG&E forecasts the Mendocino transformer bank 2 to be loaded to approximately 106 percent of its normal capacity in 2016, and 107 percent of its normal capacity in 2017, and concludes that “[t]his is an unreasonable risk. . . .”¹²

With respect to the Old Kearney substation, ORA states that PG&E forecasts the Old Kearney transformer bank 1 to be loaded to approximately 101 percent of its normal capacity in 2016, and to 103 percent of its normal capacity in 2017,¹³ and concludes that not addressing the anticipated loading until the summer of 2018 is “ill-advised.”¹⁴

ORA’s basic facts regarding the loading at the substations are based closely on PG&E data responses.¹⁵ However, ORA’s conclusion is wrong. Exhibit ORA-2C, which ORA cites in its reply brief, indicates that the traditional upgrades at the Mendocino and Old Kearney substations were to have been in place for the summer peak in 2018.¹⁶ This is the same as for the PSA projects that are intended to defer the more traditional transformer upgrade approach.

¹² ORA Reply Brief, p. 13.

¹³ ORA Reply Brief, p. 14.

¹⁴ ORA Reply Brief, p. 14.

¹⁵ ORA Reply Brief, p. 13 fn. 85, p. 14 fn. 88 (each citing PG&E data responses attached to Exhibit ORA-1).

¹⁶ Among other things, Exhibit ORA-2C contains information regarding the estimates PG&E used of when the traditional transformer projects will be operational if the PSA projects do not move forward. All of the dates fall after the summer of 2017, and before the summer of 2018.

There is no difference from a reliability perspective between the forecasted installation dates of the traditional transformer upgrades versus the PSA projects, since both the Mendocino and Old Kearney substations are summer peaking.¹⁷

In sum, the PD's conclusion that the PSAs "fail to guarantee necessary transformer capacity to allow for distribution investment deferral based on their online dates. . ."¹⁸ is not correct. Therefore, the PD should be modified to remove it.

2. The PD's Rejection Of PG&E's Two Proposed Distribution Deferral Projects Should Be Reconsidered

The PD rejects PG&E's two proposed PSA projects, stating

While we agree that there is value in adding diversity to the portfolio and gaining experience with using storage to support distribution deferral, given that the proposed purchase and sale agreements are not cost effective, and also fail guarantee necessary transformer capacity to allow for distribution investment deferral based on their online dates, we find that these agreements should not be approved.¹⁹

PG&E has acknowledged that its two, one MW PSAs are not the least expensive storage projects on a net market value (NMV) or PAV basis.²⁰ But as the PD notes, there is value in adding diversity to the portfolio and gaining experience using storage to support distribution deferral.²¹

Further, as discussed in the previous section, the PD's conclusion that the PSAs do not enable distribution investment deferral is incorrect. Therefore, based on the benefit the PD identifies in moving forward with distribution deferral storage projects generally and the fact that

¹⁷ See, Exhibit ORA-1, Appendix A, p. 45 ("Mendocino is a summer peaking substation and PG&E anticipates the energy storage distribution deferral system will shave peaks in the afternoon hours during peak loading days of the summer"); Appendix A, p. 46 ("Old Kearney is a summer peaking substation and PG&E anticipates the energy storage distribution deferral system will shave peaks in the afternoon hours during peak loading days in the summer").

¹⁸ PD, p. 13.

¹⁹ PD, p. 13

²⁰ PG&E Opening Brief, p. 17.

²¹ PD, p. 13.

these PSAs can be expected to enable PG&E to gain experience with using storage to support distribution deferral, PG&E requests that the PD's rejection of the PSAs be reconsidered. PG&E requests that the PD be modified to approve these two agreements.

II. THE INCORPORATION OF STORAGE RESOURCES INTO THE PCIA CALCULATION

At the direction of the Commission, the IOUs provided the Joint IOU Protocol,²² proposing how to integrate storage resources into the existing PCIA methodology.²³ The IOUs further described their proposal in a May 9, 2016 joint IOU workshop presentation (IOU Workshop Presentation), which included examples of PCIA calculations for both "capacity only" and "energy and capacity" storage agreements.²⁴ The "energy and capacity" example in the IOU Workshop Presentation is analogous to PG&E's ESAs.

The PD generally adopts the IOUs' proposal for how to incorporate storage resources into the PCIA calculation. In particular the PD rejects, at this time, the proposal by several parties to include a "storage adder" into to the market price benchmark.²⁵ The PD also states that the costs associated with charge the storage resource should not be included in the PCIA calculation unless the IOU is responsible for those costs and they have not been reflected elsewhere in utility generation costs already included in the PCIA calculation.²⁶

PG&E supports the PD's determination not to include a storage adder in the market price benchmark at this time. PG&E also agrees with the PD that the cost of charging should be included in the PCIA calculation *only* when those costs are actually incurred by the IOU, and are not already reflected elsewhere in the calculation. That is the intent of the IOUs' PCIA proposal.

²² Exhibit PG&E-1, Chapter 7, Attachment A.

²³ PD, p. 16.

²⁴ IOU Workshop Presentation, pp. 13-17.

²⁵ PD, p. 22.

²⁶ PD, p. 23.

The PD suggests that the IOUs' PCIA proposal would double count charging costs under some circumstances, and that the Joint IOU Proposal must be modified to ensure that outcome is avoided.²⁷ That is not the intent of the IOUs' proposal. Therefore, PG&E requests that the PD be modified to indicate that the PD is clarifying, rather than modifying, the PCIA calculation with respect to the expressed concern over double counting of charging costs.

PG&E's ESAs fall into the category of storage agreements where the IOU incurs charging costs and those costs are not reflected elsewhere in the PCIA calculation. Therefore, the charging costs associated with PG&E's ESAs should be reflected in the PCIA calculation.

There are examples of storage projects where charging costs would be included elsewhere in the utility's generation costs. The IOUs did not present such an example in the IOU Workshop Presentation, but PG&E agrees with the PD that in such a case, no additional costs beyond what the utility incurs should be reflected in the PCIA calculation.²⁸

A. PG&E Supports The PD's Determination Not To Incorporate The Proposed "Storage Adder" Into The PCIA Calculation At This Time

PG&E supports the PD's determination not to include in the PCIA calculation, at this time, the separate "storage adder" as proposed by community choice aggregation and direct access provider parties (CCA/DA parties).²⁹

B. PG&E Agrees With The PD That Charging Costs Should Be Included In The PCIA Calculation *Only* When They Are Incurred By The IOU And Not Already Reflected In Other Generation Costs Reflected In The PCIA

PG&E recommends that the PD's PCIA treatment for storage be modified in one respect. The PD indicates that the PCIA should be modified so that charging costs should only be included in the PCIA if the IOU incurs those costs, and they have not been reflected in other utility generation costs already included in the PCIA calculation.³⁰ PG&E agrees. Because that

²⁷ PD, p. 23.

²⁸ PD, p. 23.

²⁹ PD, p. 22.

³⁰ PD, p. 23.

is already the intent of the PCIA as proposed by the IOUs, PG&E requests that the PD be modified to state that the PD is clarifying the PCIA calculation, rather than modifying it.

C. The Charging Costs Associated With PG&E's Energy Storage Agreements Should Be Included In The PCIA Calculation, Because PG&E Is Responsible For Those Costs And They Are Not Included Elsewhere In The Calculation

PG&E's ESAs are contracts where the IOU is responsible for the cost of charging, and where those costs are not already reflected in other utility generation costs. Therefore, as the PD indicates, the costs of charging under PG&E's ESAs should be reflected in the PCIA calculation.

Under its ESAs, PG&E is responsible for providing charging energy,³¹ and thus is responsible for the incremental costs to charge storage resources. Under the ESAs, the charging energy for a storage resource comes from the California Independent System Operator (CAISO) wholesale energy markets. The storage resource's charging will be seen as wholesale purchases of electricity by PG&E from those markets. The CAISO will bill PG&E for those charging costs, and PG&E will be responsible for paying the CAISO for them. The ESA counterparty will not reimburse PG&E for them.

The incremental amount on PG&E's CAISO bill will not be reflected elsewhere in the PCIA calculation. It will not be associated with the cost of any other generation. Therefore, including this cost of charging an ESA resource in the PCIA calculation will not double count it. Consistent with the PD, these costs of charging, billed by the CAISO to PG&E, should be included in the PCIA calculation.

By the same token, the output of the storage resource must be (and will be, under the IOU proposal) reflected in the PCIA market price benchmark calculated for the PG&E's portfolio. Both aspects of the incorporation of the ESAs into the IOU's proposed PCIA calculation, the

³¹ Exhibit PG&E-1, p. 3-1.

inclusion of the cost of charging and the inclusion of the value of the output, are reflected in the “energy and capacity” example set forth in the IOU Workshop Presentation.³²

D. There Are Examples Of Storage Projects Where Charging Costs Are Included Elsewhere In The Utility’s Generation Costs, And In Such Cases No Additional Charging Costs Should Be Included In The PCIA Calculation

Although PG&E has not presented any of these for approval in this proceeding, and the IOUs did not provide such an example in the IOU Workshop Presentation, there is another type of storage arrangement where it would be appropriate to exclude the costs of charging a storage resource from the PCIA calculation. PG&E believes that this is what the PD is contemplating when it describes a project where “the utility would not incur any incremental cost associated with the charging power for the storage resource because it was already procured as a generation resource.”³³

This type of storage project would be where the storage resource is operated in an integrated fashion with a specific generator. In that case, it would make sense to assume the storage device is charged only from the generator, and to include, as a cost of charging, only the incremental cost PG&E incurs to run the generator to charge the storage resource in the PCIA calculation. PG&E agrees that that cost should be included once, not twice.

On the output side, the *net* output of the integrated storage/generation resource should be reflected in the PCIA market price benchmark calculation. The generation that is used to charge the resource should not be included in the output reflected in the market price benchmark. The output cannot be used to both charge the resource, and to provide value into the market.

³² IOU Workshop Presentation, pp. 13, 15-16.

³³ PD, p. 23.

III. IN RESPONSE TO THE PD’S ADMONISHMENT REGARDING PG&E’S “CPUC APPROVAL” CONTRACT CLAUSE, PG&E PROPOSES TO USE THE NON-MODIFIABLE CLAUSE IN THE RENEWABLE PORTFOLIO STANDARD POWER PURCHASE AGREEMENT

The PD admonishes PG&E because PG&E’s “pro forma terms attempt to constrain the Commission’s ability to evaluate the appropriateness of the proposed cost recovery terms, by threatening to not pursue cost-effective storage contracts, in opposition to state policy.”³⁴

PG&E would like to clarify that by using this contract term, it did not intend to limit the Commission’s exercise of its regulatory authority. PG&E fully acknowledges the Commission’s jurisdiction over PG&E generally, and over the cost recovery treatment that will be associated with the storage contracts that PG&E has submitted for approval in particular. PG&E included the cost recovery treatment condition in its CPUC Approval clause because of the importance to PG&E of this issue. It is of critical importance to PG&E that its bundled customers not bear an unfair portion of any above-market costs that might be associated with these contracts in the future.

To address the PD’s concern, PG&E proposes to modify its CPUC Approval clause to use the following in its future ES RFOs, which is based closely on the relevant “non-modifiable clause in the RPS PPA, with modifications indicated by square brackets:

“CPUC Approval” means a final and non-appealable order of the CPUC, without conditions or modifications unacceptable to the Parties, or either of them, which contains the following terms:

- (a) approves this Agreement in its entirety, including payments to be made by the Buyer, subject to CPUC review of the Buyer’s administration of the Agreement; and
- (b) finds that any procurement pursuant to this Agreement is procurement from an eligible [storage] resource for purposes of determining Buyer’s compliance with any obligation that it may have to procure eligible [storage] energy resources pursuant to [CPUC D.13-10-040], or other applicable law.

³⁴ PD, p. 24.

CPUC Approval will be deemed to have occurred on the date that a CPUC decision containing such findings becomes final and non-appealable.

IV. MEETING STORAGE TARGETS

As PG&E reported in its January 4, 2016 *Report of Pacific Gas and Electric Company Demonstrating Compliance with Energy Storage System Procurement Targets and Policies* (PG&E Storage Report),³⁵ as well as in A.16-03-001,³⁶ PG&E has met its 2014 storage targets.

However, that calculation is not static. In its opening brief in this proceeding PG&E stated that PG&E and the developer of one generation/market participation ESA, three MW in size, had agreed to terminate the ESA.³⁷ This reduced PG&E's storage count by three MW.

The PD proposes to not approve two MW of PG&E's proposed storage resources. If that aspect of the PD is not modified, the Commission's action in this proceeding will affect PG&E's storage count, as well, lowering it by an additional 2 MW.

In the other direction, in A.16-04-024, PG&E is seeking approval of an additional four MW storage project resulting from its 2014 ES RFO, raising PG&E's 2014 storage count by four MW.

All of this is described in the PD,³⁸ in the context of whether PG&E has met its 2014 storage target.³⁹ PG&E is hopeful that its 2014 storage count will remain above its 2014 target, that the Commission will revise the PD to modify its rejection of PG&E's distribution deferral projects, and that the Commission will approve the four MW project in A.16-04-024. In any event, PG&E's activities and applications in connection with the Commission's storage program clearly demonstrate PG&E's good faith intent and effort to meet PG&E's 2014 storage targets.

³⁵ Filed in R.15-03-011.

³⁶ A.16-03-001, PG&E Prepared Testimony, Chapter 2.

³⁷ PG&E Opening Brief, p. 3.

³⁸ PD, p. 14.

³⁹ PD, pp. 13-15.

In order to reduce uncertainty over what PG&E should do if the Commission rejects PG&E's distribution deferral agreements and/or its A.16-04-024 storage project, resulting in its storage count dropping below its 2014 targets, PG&E proposes that the PD be modified to direct PG&E to add any resulting shortfall to its procurement target for its 2016 ES RFO. This approach is straightforward, and consistent with what the Commission has already determined should be done if an IOU seeks and obtains a deferral of a portion of its storage target. The Commission has already determined that in that case, the affected IOU's procurement target for its next solicitation is to be increased to include the deferred amount.⁴⁰

Adding any shortfall to the amount PG&E is to obtain in its 2016 ES RFO is also an appropriate approach here, especially in light of PG&E's activities to support the Commission's adopted storage program, including PG&E's submission of storage resource agreements for approval that, if approved, would enable PG&E to meet its 2014 targets.

Respectfully submitted,

CHARLES R. MIDDLEKAUFF
MARK R. HUFFMAN

By: /s/ Mark R. Huffman
MARK R. HUFFMAN

Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-3842
Facsimile: (415) 973-5520
E-Mail: MRH2@pge.com

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

Dated: August 9, 2016

⁴⁰ D.13-10-040, Appendix A, p. 10.

Appendix A

Proposed Modifications to the PD's Findings of Fact, Conclusions of Law, and Ordering Paragraphs

Findings of Fact

3. PG&E's proposed purchase and sale agreements are not cost-effective ~~and are not contractually required to be online in time to defer PG&E's identified distribution need.~~

4. Based on forecasts presented in this proceeding, the ~~The~~ transformers at the Mendocino and Old Kearney substations may ~~will~~ become overloaded by relatively small amounts prior to the commercial operation date of the proposed PG&E purchase and sale agreements.

11. Including the charging costs for energy storage in the Indifference Amount may result in double counting of this cost if they are already included in connection with another generation facility in the IOU portfolio.

Conclusions of Law

3. PG&E's proposed purchase and sale agreements should ~~not~~ be preapproved.

4. ~~Because we do not approve the PG&E purchase and sale agreements, the issue whether a CEQA review is required for PG&E's purchase and sale agreements need not be decided.~~

6. Depending on the outcome of A.16-04-024, PG&E may fall short of ~~has not yet met~~ its 2014 Energy Storage Procurement target established in D.13-10-040 and D.14-10-045.

Additional Conclusion of Law: If PG&E falls short of its 2014 Energy Storage Procurement target as a result of the outcome of A.16-04-024, the shortfall should be added to the amount of storage PG&E seeks to obtain in its 2016 Energy Storage RFO.

7. The Joint IOU Protocol should be clarified; ~~modified to remove~~ the costs related to charging the storage resource must not be included if ~~unless~~ the charging power costs have ~~not~~ already been reflected in utility generation costs.

8. As ~~clarified~~ ~~modified~~, the Joint IOU Protocol is a reasonable method for incorporating the costs and value of energy storage contracts serving the Generation/Market function in calculating Power Cost Indifference Adjustment rates for ten years, for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company.

ORDER

IT IS ORDERED that:

4. The proposed energy storage contracts between Pacific Gas and Electric Company and counterparty Hecate Energy LLC for Old Kearney and Mendocino are ~~not~~ pre-approved.

5. The Joint Investor Owned Utility Protocol is ~~clarified~~ ~~modified~~ to ensure ~~remove~~ the costs associated with charging the storage resource are not included in ~~from~~ the Indifference Amount calculation and that the calculation should ~~instead~~ just reflect the energy storage purchase costs (i.e., fixed capacity costs, variable O&M expenses, and any other costs included in the contract) ~~unless~~ if the charging power costs have ~~not~~ already been reflected in utility generation costs.

6. The Joint Investor Owned Utility Protocol is adopted, as clarified ~~modified~~ in Ordering Paragraph 4, for purposes of incorporating the costs and value of energy storage contracts serving the Generation/Market function in calculating the Power Cost Indifference Adjustment for ten years, for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company.

8. Pacific Gas and Electric Company's Application 15-12-004 is approved except that ~~the request for approval of the Hecate Energy (Old Kearney) and Hecate Energy (Mendocino) contracts is denied~~, no finding is made as to whether additional contracts stemming from the 2014 Request for Offers will be considered, a finding that depending

on the outcome of A.16-04-024 PG&E may fall short of~~has not yet met~~ its 2014 storage target is made, and the Power Cost Indifference Adjustment treatment of any above market costs is limited to ten years.

Additional Ordering Paragraph: If PG&E falls short of its 2014 Energy Storage Procurement target as a result of the outcome of A.16-04-024, PG&E will add the shortfall to the amount of storage it seeks to obtain in its 2016 Energy Storage RFO.
